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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,408	03/26/2004	David H. Stark	STRK-26,696	3278
25883	7590	10/17/2006		
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EXAMINER
LAZORCIK, JASON L

ART UNIT	PAPER NUMBER
1731	

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/811,408

Applicant(s)

STARK, DAVID H.

Examiner

Jason L. Lazorcik

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2004 and 07 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-12 and 19-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 03/07/2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☒ Other: IDS Filed: 06/03/2005.

**DETAILED ACTION**

***Election/Restrictions***

Claims 1 through 12, 19 and 20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on August 7, 2006.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17 sets forth a limitation reciting "the sheets" in line 2 and line 3 of the claim. It is unclear which sheet(s) of the sheets defined in the parent claim 13 the applicant intends as the antecedent for present instance of "the sheets". As such the particular metes and bounds for which the applicant seeks patent protection are rendered unclear and indefinite.

Claim 18 sets forth a limitation reciting "the sheets" in line 2 and line 3 of the claim. It is unclear which sheet(s) of the sheets defined in the parent claim 13 the applicant intends as the antecedent for present instance of "the sheets". As such the particular metes and bounds for which the applicant seeks patent protection are rendered unclear and indefinite.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

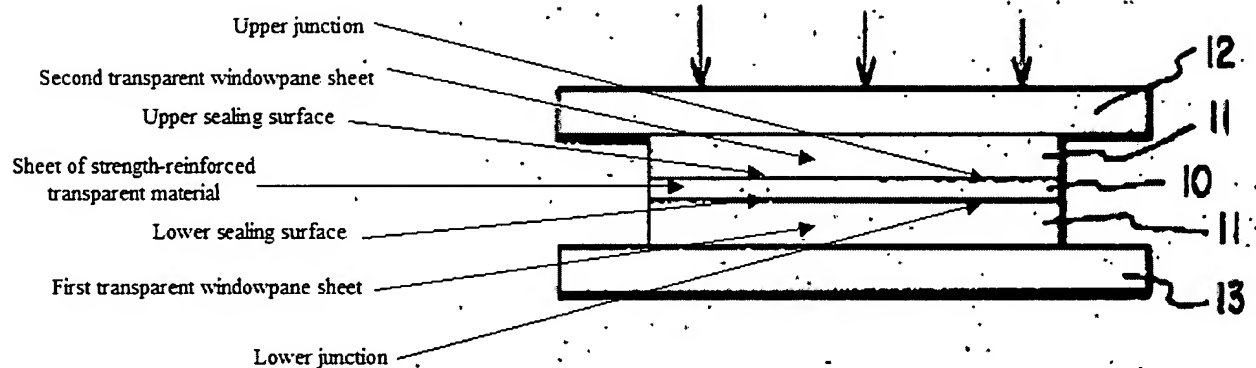
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13, 14, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by martin (US 3,410,674). Briefly, Martin teaches a method of forming a seal between sheets of glass by application of elevated temperature and pressure to make a laminate structure.

With respect to claim 1 and with particular attention to the reference figure 2 annotated to reflect the applicants chosen lexicon, Martin teaches the following;

1. Providing a sheet of devitrified glass (Column 4, Lines 41- 52) or a “sheet of strength-reinforced transparent material” with upper and lower sealing surfaces as indicated in the figure.
2. Providing first and second transparent windowpane sheets or “Pre-formed bodies of low expansion glasses” disposed in relation to the sheet of devitrified glass in such manner as to produce an upper junction and a lower junction as claimed
3. Applying a predetermined contact pressure at a predetermined temperature (column 4, lines 11-17) in order to achieve a seal or “a “diffusion bond” between the first and second transparent windowpane sheets and the devitrified sheet.

**FIG. 2**

Regarding claim 14, Martin teaches that pressure is applied by inserting the assembly between platens (12) and (13) followed by applying heat by inductive means or by insertion of the apparatus into a furnace (Column 4, lines 34-40). This disclosure is read as a method wherein the step of pressing is performed before the step of heating as claimed.

With respect to Claim 16, Martin teaches that the assembly of 10 and 11 is subjected to heat and pressure to complete the seal". Where the immediate disclosure is read as providing both heat and pressure upon the assembly at the same time, said disclosure is read in the immediate claim as a process wherein the steps of pressing the windowpane sheets against the sheet of strength-reinforced material and of heating the junctions are performed simultaneously".

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Martin (US 3,410,674) as applied in the rejection of claim 13 under 35 USC 102(b) above.

Martin fails to explicitly set forth a scenario wherein the laminate comprising the two preform sheets (11) and a devitrified interlayer (10) is heated first followed by a pressing step to complete the bonding process. The reference does teach scenarios wherein the laminate is first pressed followed by application of heat to effect a bond and indicates that both heat and pressure are applied simultaneously to effect a satisfactory bond. In light of these disclosures and ***in the absence of any unexpected results***, it would have been obvious to one of ordinary skill in the art at the time of the invention to carry out the steps of heating and applying pressure ***in any order*** which produces an effective bond between the elements of the laminate.

Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin (US 3,410,674) as applied to claim 13 above, and in further view of the general teachings on the physical properties of Pyrex borosilicate glass

(<http://en.wikipedia.org/wiki/Pyrex>) and the general teachings set forth by Bayrashev et. al. (Sensors and Actuators A: Physical, Volume 103, Issues 1-2, 15 January 2003, Pages 16-22). Given the lack of clarity of the present claims as identified in the respective rejections claims 17 and 18 under 35 USC 112 above, it is here understood that reference to "the sheets" in each claim 17 and 18 refer to the collective "a first transparent windowpane sheet" and "a second transparent windowpane sheet" as set forth in Claim 13 lines 7-8.

Therefore with respect to Claim 17 and Claim 18, Martin teaches in Example 1 that the preformed body in the assembly discussed in the rejection of Claim 13 above is formed of a hard, low expansion borosilicate glass having the identified compositional ratios. The reference indicates that when utilizing a borosilicate glass, the laminate assembly is heated to 525°C to yield an effective fusion bond (Column 5, Lines 23-26). Martin is silent regarding either the glass transition temperature or the softening temperature of the borosilicate glass used in this specific example.

Pyrex brand borosilicate glass is a well known low coefficient of expansion glass. Given the wide industrial use of this particular formula of glass, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the commonly available Pyrex brand borosilicate glass for the pre-formed borosilicate bodies in the laminate structure as described in Example 1 of the Martin reference. Where the softening point of Pyrex is indicated to be 821°C (pg2, line 3 of <http://en.wikipedia.org/wiki/Pyrex>) and the glass transition temperature is identified as 600°C (pg 21, column 2, paragraph 2 of Bayrashev et. al.), the Martin process utilizing

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Pyrex borosilicate glass and heated as set forth in Example 1 to 525°C would be carried out below **both** the glass transition temperature (TG) and the softening temperature (TS) of the Pyrex sheets as claimed.

Regarding Claim 17, the Martin process utilizing Pyrex brand borosilicate glass as set forth above is understood to describe a process "wherein during the step of heating the junctions, the temperature of the sheets remains below the glass transition temperature (TG) of the respective materials from which the sheets are formed."

Regarding Claim 18, the Martin process utilizing Pyrex brand borosilicate glass as set forth above is understood to describe a process "wherein during the step of heating the junctions, the temperature of the sheets remains below the softening temperature (TS) of the respective materials from which the sheets are formed."

### ***Conclusion***

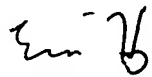
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason L. Lazorcik whose telephone number is (571) 272-2217. The examiner can normally be reached on Monday through Friday 8:30 am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JLL

  
ERIC HUG  
PRIMARY EXAMINER